

REMARKS/ARGUMENTS

Claims 1-22 are pending in the application. The Applicant hereby requests further examination and reconsideration of the application in view of these remarks.

In paragraph 2 of the final office action, the Examiner rejected claims 1-5 and 8-22 under 35 U.S.C. §103(a) as being obvious over Funato et al., "TCP-R: TCP Mobility Support for Continuous Operation," *Network Protocols*, 1997 ("Funato") in view of U.S. Patent Application Pub. No. 2004/0151158 ("Gannage"). In paragraph 3, the Examiner rejected claim 6 under 35 U.S.C. §103(a) as being obvious over Funato in view of U.S. Patent No. 6,072,942 ("Stockwell"). In paragraph 4, the Examiner rejected claim 7 under 35 U.S.C. §103(a) as being obvious over Funato in view of U.S. Patent App. No. 2004/0202160 ("Westphal").

For the following reasons, the Applicant submits that all of the pending claims are allowable over the cited references.

Claims 1-22

Claim 1 recites:

1. A method of migrating from a current endpoint address to a new endpoint address by a migrator during a session between the migrator and a non-migrator in a packet-based communication system, the method comprising the steps of:

- (a) changing, in the migrator, the current endpoint address to the new endpoint address;
- (b) suspending transmission to the non-migrator of packets with the new endpoint address;
- (c) informing the non-migrator, via a channel separate from the channel of the session between the migrator and the non-migrator, of the change to the new endpoint address; and
- (d) resuming transmission to the non-migrator of packets with the new endpoint address.

Claim 1 requires a step of "(c) informing the non-migrator, via a channel separate from the channel of the session between the migrator and the non-migrator, of the change to the new migrator endpoint address." This is described in the specification, e.g., at p. 8, lines 21-23; p. 9, lines 3-10; p. 10, line 30, to p. 11, line 2; p. 11, lines 9-11, 19-24, and 26-28; and p. 12, lines 6-11.

In rejecting claim 1 as obvious over Funato and Gannage, the Examiner acknowledges that "Funato does not explicitly show using a channel separate from the channel of the session between migrator and the non-migrator to inform changes." However, the Examiner argues that "[n]onetheless, this feature is well known in the art and would have been an obvious modification of the system disclosed by Funato, as evidenced by Gannage." The Examiner argues that:

In analogous art, Gannage disclose "Notifications are out-of-band signals in that they occupy a totally separate channel from the main message channel. Examples of this are notifications that are established over TCP/IP sockets whereas the messages themselves are sent as HTTP traffic." (¶0023).

Giving the teaching of Gannage, a person of ordinary skill in the art would have readily recognized the desirability and the advantage of modifying Funato by employing the separate channel notification system of Gannage to prevent overloading the existing session channel between the migrator and non-migrator with notification information. By send notification

messages in a separate out of band channel will result a faster data deliver and reduction of transport delays.

Gannage discloses a method for exchanging voice over data channels, e.g., to implement telephone conferencing (Title; Abst.; ¶[0003]). In Gannage, the “notifications” are fragments of voice data sent over a TCP/IP socket (¶¶[0024]-[0026]). Gannage states:

We use a notification channel based approach for near real time data streaming for voice. ... The first element involves taking the voice input from the sender in small, digitized packets. ... The second element involves taking these time packets of voice data and sending them out in a sequential manner over the notification channel. As subsequent speech samples are composed, they are sent out sequentially over the notification channel. At the receiving end these packets of voice data are played back through the codec supported by the platform as they are received.

Id.

Gannage is non-analogous art, because Gannage is concerned with the problem of transferring voice over data channels, e.g., for telephone conferencing, while Funato is concerned with the problem of changing endpoint addresses. One skilled in the art of Funato would not have turned to Gannage for guidance regarding changing endpoint addresses, just as one skilled in the art of Gannage would not have turned to Funato for guidance regarding transferring voice over data channels. Thus, Funato and Gannage are not properly combinable to reject claim 1 as obvious.

Indeed, Gannage has absolutely nothing to do with migrating from a current endpoint address to a new endpoint address in a packet-based communication system. Gannage uses a separate channel to send voice data, not to provide notification of a change of endpoint address. Indeed, Gannage does not use a separate channel or “notification channel” to provide notification of anything at all! The fact that Gannage discloses the use of a separate channel for one particular purpose, namely, the transmission of voice data, does not, in any way, suggest the desirability of using a separate channel to provide notification of a change of endpoint address in a method of migrating from one endpoint address to another.

The Examiner alleges two different motivations for combining Funato and Gannage.

First, the Examiner argues that one skilled in the art “would have readily recognized the desirability and advantage of modifying Funato by employing the separate channel notification system of Gannage to prevent overloading the existing session channel between the migrator and non-migrator with notification information.” This motivation does not make sense. There is no disclosure in Funato or Gannage to suggest that overloading an existing session with notification information is a problem, nor that such a problem, if it did exist, would be solved by using a separate channel for notification information. In fact, the reason for using a separate channel in the present invention is not to prevent overloading an existing session, but rather, so that the migrator can still communicate its changes to the non-migrator even after the IP address change occurs (Applicant’s specification, p. 12, lines 8-10). In other words, when an IP address change has occurred at a migrator, and the non-migrator is not aware of this change because the original session no longer provides communication with the migrator, using a separate channel permits the non-migrator to be informed of the IP address change so that it can resume communications with the migrator. In this scenario, overload of the existing session is not an issue, because there is no longer an “existing session” between the migrator and non-migrator once the migrator has changed its IP address – in fact, at that point, there is no “session” at all between the migrator and non-migrator until the non-migrator is made aware of the IP address change and communication resumes

at the new IP address. Accordingly, the first motivation provided by the Examiner does not make sense in the context of Funato.

Second, the examiner argues that sending notification messages in a separate out of band channel will result in faster data delivery and reduction of transport delays. This second motivation also does not make sense. Gannage makes it clear that using a separate channel does not, in fact, reduce transport delays, but actually causes additional delays! For example, Gannage states that there may be an additional delay of one to ten seconds to transmit a fragment of voice data, which Gannage attempts to dismiss as minimal: “The overall experience derived by using our approach is near real time communication in which one receives a voice message with a small time lag in a pseudo streamed fashion with reasonably good quality. ... In near real time communication, the audio content exchanged between the participants is delayed, but the participants may still carry on an effective conversation or other exchange of audio content. Illustratively, the delay may be greater than one second but less than ten seconds” (¶¶0030). Accordingly, the second motivation provided by the Examiner does not make sense in the context of Gannage.

The motivations alleged by the Examiner for combining Funato and Gannage do not make sense to the Applicant.

The Examiner has provided no valid suggestion or motivation in the prior art for combining Funato and Gannage, and absent such suggestion or motivation, these references cannot properly be combined. Under the obviousness analysis provided by the Supreme Court recently in *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. ___, 127 S. Ct. 1727 (2007), it is “important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements” in the manner claimed (Slip. Op. at 144). Moreover, in her May 3, 2007 Memorandum to Technology Center Directors, Margaret A. Focarino, Deputy Commissioner for Patent Operations, clearly states that “in formulating a rejection under 35 U.S.C. §103(a) based upon a combination of prior art elements, it remains necessary to identify the reason why a person of ordinary skill in the art would have combined the prior art elements in the manner claimed.” In the present application, the Examiner has failed to identify any valid reason for combining Funato and Gannage, and therefore, the pending rejection of claim 1 as obvious over Funato and Gannage is invalid and should be withdrawn.

For all these reasons, the Applicant submits that claim 1 is allowable over Funato and Gannage. For similar reasons, the Applicant submits that claims 12 and 20-22 are allowable over Funato and Gannage. Since the rest of the claims depend variously from claims 1 and 12, it is further submitted that those claims are also allowable over the cited references. The Applicant submits therefore that the rejections of claims under § 103(a) have been overcome.

In view of the above amendments and remarks, the Applicant believes that the now-pending claims are in condition for allowance. Therefore, the Applicant believes that the entire application is now in condition for allowance, and early and favorable action is respectfully solicited.

Claims 6 and 7

Claim 6 recites that “the step of suspending transmission of packets to the non-migrator at the transport layer comprises preventing or resolving a race condition by applying one or more firewall-filtering rules to prevent session data from leaving the system until the migration process is complete.” In rejecting claim 6 as obvious over Funato in view of Stockwell, the Examiner acknowledges that Funato fails to teach what is recited in claim 6. The Examiner cites Stockwell, at col. 16, lines 33-43, as supplying the missing teachings. This portion of Stockwell states:

Note that utility functions should probably be added to the filter library to support opening and reading text files with the same file locking semantics used by the configuration library so that deadlock and race conditions will be avoided.

Another function which may be provided through a modifier is to sanitize the message headers. Sanitizing the message headers means to remove information from the headers that potentially discloses information about the internal network which is not required by the mail delivery system to deliver the mail. Initially, this involve removing the Received-by lines on out-bound mail. Many other modifiers are also possible, such as ones that apply digital signatures or encrypt messages based on the destination address.

As can be seen, although this portion of Stockwell mentions the words “race conditions,” there is no mention of firewall-filtering rules, nor of preventing session data from leaving a system until a migration is complete. This is because Stockwell’s discussion of race conditions deals with opening and reading text files and has nothing to do with session data during an IP migration process. Since Stockwell fails to disclose the recitations of claim 6, namely, applying one or more firewall-filtering rules to prevent session data from leaving the system until the migration process is complete, no combination of Funato and Stockwell can possibly render claim 6 obvious.

The Examiner additionally makes passing reference to U.S. Patent No. 6,332,163 (“Bowman-Amuah”) at col. 263, lines 57-67, which also mentions the words “race conditions”:

In order to prevent potential race conditions the client must be given sufficient time to respond to the keep alive message from the server before the context is deleted. Typically the client has a separate listener for upward messages originating at the server, so queuing is not an issue at the client end. However, a server is more likely to queue on the receiving end, especially in a system with high message rates.

However, as with Stockwell, this portion of Bowman-Amuah also fails to disclose what is recited in claim 6. This portion of Bowman-Amuah deals with providing sufficient time for responding to keep-alive messages, not applying one or more firewall-filtering rules to prevent session data from leaving a system undergoing an endpoint address migration until that migration is complete. Thus, no combination of Funato and Bowman-Amuah can possibly render claim 6 obvious.

The foregoing discussion provides additional reasons for the patentability of claim 6, and claim 7 depending therefrom, over the cited references.

Moreover, the rejections of claims 6 and 7 are improper.

Claim 6 is a dependent claim that depends from claim 5. Claim 5 was rejected under 35 U.S.C. §103(a) based on the combination of Funato and Gannage, while dependent claim 6 was rejected under 35 U.S.C. §103(a) based on the combination of Funato and Stockwell. It is improper to reject a dependent claim under a combination of references that does not include all of the references used to reject a claim from which that dependent claim depends. As such, the rejection of dependent claim 6 based on the combination of Funato and Stockwell is improper and should be withdrawn. If, in a next office action, claim 6 is rejected under new grounds of rejection (e.g., based on a combination of Funato, Gannage, and Stockwell), then the next office action cannot properly be made final.

Claim 7 is a dependent claim that depends directly from claim 6 and indirectly from claim 5. Claim 6 was rejected under 35 U.S.C. §103(a) based on the combination of Funato and Stockwell, and claim 5 was rejected under 35 U.S.C. §103(a) based on the combination of Funato and Gannage, while dependent claim 7 was rejected under 35 U.S.C. §103(a) based on the combination of Funato and Westphal. It is improper to reject a dependent claim under a combination of references that does not include all of the references used to reject a claim from which that dependent claim depends. As such, the rejection of dependent claim 7 based on the combination of Funato and Westphal is improper and should be withdrawn. If, in a next office action, claim 7 is rejected under new grounds of rejection (e.g., based on a combination of Funato, Gannage, Stockwell, and Westphal), then the next office action cannot properly be made final.

Fees

During the pendency of this application, the Commissioner for Patents is hereby authorized to charge payment of any filing fees for presentation of extra claims under 37 CFR 1.16 and any patent application processing fees under 37 CFR 1.17 or credit any overpayment to Mendelsohn & Associates, P.C. Deposit Account No. 50-0782.

The Commissioner for Patents is hereby authorized to treat any concurrent or future reply, requiring a petition for extension of time under 37 CFR § 1.136 for its timely submission, as incorporating a petition for extension of time for the appropriate length of time if not submitted with the reply.

Respectfully submitted,

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